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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,456	06/29/2001	Anil Kumar Annadata	M-11830 US	9005

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EXAMINER

UBILES, MARIE C

ART UNIT	PAPER NUMBER
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2642

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/895,456

Applicant(s)

ANNADATA ET AL.

Examiner

Marie C. Ubiles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on July 9, 2004 has been entered. No claims have been amended. No claims have been cancelled. No claims have been added. Claims 1-36 are still pending in this application, with claims 1, 15, 23 and 27 being independent.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 7, 13-17, 23, 25, 27, 29-31 and 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sikora et al. (US 6,449,646).

As for claim 1, Sikora et al. discloses a method of routing work items (or *transaction messages*) in a multi-channel communication (as disclosed by PSTN 26 and Internet 28 in Fig. 1) queuing system (See Abstract), the method comprising, forming a list of routes (or *email queues, call queues, other queues*)(See Figure 3, element 130), wherein each route includes information (See, for example, Figures 5-6) and element related to the type of communication media (or *transaction type*) along the route for handling one or more of the work item (See Col. 6, lines 23-48).

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Claims 15 and 27 are rejected for the same reasons as claim 1.

As for claims 13-14, Sikora et al. discloses a computer readable storage media (as read on the function of "*workflow application 42*") and a signal (or *call, e-mail*) in a carrier medium (or *PSTN, Internet*) comprising computer instructions (or set of rules) to implement the method of claim 1 (See Col. 6, lines 11-16).

As for claims 5, 16 and 30, Sikora et al. discloses the method as claimed wherein each route further includes information related to the service level (or *preferential customers*) for work items handled on the route (See Fig. 4 and Col. 7, lines 34-36 and 41-42).

As for claims 23 and 25, Sikora et al. discloses a database structure (or *queue engine 44*) for a multi-channel communication (as disclosed by PSTN 26 and Internet 28 in Fig. 1) queuing system (See Abstract), comprising a list of routes (or *email queues, call queues, other queues*)(See Figure 3, element 130), wherein the list of routes includes information related to or more properties of the route (See Col. 7, lines 23-27).

As for the limitation in claim 25 specifying "the database structure...comprising information related to the type of communication media available along the route for handling one or more work items" may be read on the *email queues, call queues, other queues* (e.g. IP Voice) as disclosed by Sakato et al. in See Figure 3.

As for claims 31 and 34, Sikora et al. discloses the claimed limitations in Col. 7, line-65 through Col. 7, line 3.

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Claimed limitations in claim 35 are disclosed by Sikora et al. in Col. 11, lines 35-45.

Claims and 17 are rejected by the same reasons as claim 23.

Claim 29 is rejected for the same reasons as claim 25.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 2-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sikora et al. (US 6,449,646).

As for claim 2, the limitation specifying "each route...includes information indicating whether the route is active", may be read in the obvious case of the e-mail server crashing and thus the e-mail transactions not being able to be processed by queue engine.

As for claims 3, while Sikora et al. does not directly disclose "each route further includes information related to the priority of the route" and "each route further includes information related to the service level for work items handled on the route", Sikora's et al. system do teach the use of an "VIP e-mail queue 136" and "VIP call queue 146", designated to serve preferential customers (See Fig. 4 and Col. 7, lines 34-36 and 41-42),

It would have been obvious to one of ordinary skill to associate the “VIP” identifier and the status of a customer being treated in a preferred manner with the priority of the customer’s request, such treatment –for example, prompt service, not having to wait for long periods- is commonly provided to customers with VIP or preferred status.

As for claim 4, while Sikora et al. does not directly disclose the limitation specifying, “each route further includes information related to whether work items can be handled real-time”; it would have been obvious to one of ordinary skill that a “webchat request/assign” (See Fig. 5) will be performed in such a manner, as it is well-known that chat sessions occur in real time.

As for claim 6, while Sikora et al. does not directly disclose the limitation specifying, “each route further includes information related to the number of work items that can be assigned to the route”; the limitation may be read into the volume of messages/requests received and assigned to the different queues (See Fig. 2 and Col. 4, lines 22-66) The amount of messages/requests of a finite nature (as read on “... a number of telephone call messages...” ) and thus to provide information related to the “number of work items that can be assigned to the route” would have been obvious to one of ordinary skill.

6. Claims 8-12, 18-22, 24, 28 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sikora et al. (US 6,449,646) as applied to claims 1, 5, 7, 15-17, 23, 25, 27 and 30 above, and in view of Broughton et al. (US 2003/0018702).

As for claims 8-12, Sikora et al. discloses the system as claimed except for the steps of *combining two or more of the properties of the route using a Boolean operator, substituting a value for a variable in one or more of the properties, entering one or more escalation rules for the route, combining two or more of the escalation rules using a Boolean operator, and substituting a value for a variable in one or more of the escalation rules*. Sikora et al. also lacks the limitation of *the queuing engine being operable to determine the amount of time that a work item has been waiting to be assigned to an agent, and to escalate the search for an agent to handle the work item based on the escalation rules*.

Broughton et al. teaches "...a three-tiered service model 100 for a digital multimedia contact center...there are three service tiers: self-service tier 101, deferred service tier 103, and immediate assistance tier 105. [...] A contact entering the contact center is initially assigned to one of the three tiers based on the type of media used by the contact in accessing the contact center. The embodiment shown in Fig. 1 is further described with reference to three media types: voice calls, emails, and World Wide Web, although the invention is not so limited. Voice calls are initially routed to the immediate assistance tier 103, emails are initially routed to the self-service tier 101. Subsequent routing may be performed that escalates or de-escalates the contact to another tier (shown as arrows in FIG.1). The subsequent routing can be based on one or more routing criteria, including factors defined by the contact center owner or subscriber, such as priority, access phone numbers, and time-out periods, and environmental factors such as contact activity. [...] The system architecture for contact

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center 200 is based on a workflow engine 201 that directs the activities of the agents in the center using workflow steps. A contact workflow is initiated by events that are routed into one of a set of workflow subsystems 205 by one of a set of media routers 221.

Each media router 221 and each corresponding workflow subsystem 205 are dedicated to a contact media type. [...] Information that narrows down the set of agents to which a contact can be routed is referred to as "contact requirements". Examples of contact requirements include product knowledge, language fluency, and previous communication with the contact (each contact is considered a new one)." (See Detailed Description, P. 0025, lines 1-4; P. 0026, lines 1-16; P. 0027, lines 1-10; and P. 0030, lines 6-11).

Broughton et al. further teaches "The iCC uses workflows to process contact, manage events, and control the overall contact functions. [...] Each node is associated with workflow code that implements a high-level, compound script action, such as "play menu with interruptible prompts" or "play music until an agent is available", that are available to the workflow engine 900. The script actions are built from workflow steps. For ease of explanation, the script actions represented in Fig. 9A are simple, single commands, e.g., node A 911 represents the function "if (x boolean y)," where "x," "boolean," and "y" are parameters that will be replaced by values specified by an instance of the node A 911. It will be appreciated that the invention is limited by the example or by the workflow steps shown herein." (See Detailed Description, P. 0135, lines 1-2 and P. 0316, lines 6-17).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sikora's et al. invention by having a workflow code that implements a high-level, compound script action where actions (i.e. properties) are combined using a Boolean function (i.e. combining two or more properties of the route using a Boolean operator), where contacts are assigned to one of three tiers for service based on media type (i.e. entering one or more escalation rules for the route), where escalation or de-escalation to another tier can be based on one or more criteria (i.e. combining two or more of the escalation rules using a Boolean operator), and where parameter (i.e. variables) will be replaced by values specified by a node (i.e. substituting a value for a variable in one or more of the properties), as taught by Broughton et al; thus in this manner integrating the different media into a single center in such a way that contacts of disparate nature (i.e. work items) are allocated to agents in a more effective way.

Claims 18-22, 24 and 28 are rejected for the same reasons as claims 8-12.

As for claim 36, Broughton et al. teaches "...if the routing criteria of a contact passes a pre-defined threshold, the contact may be escalated or de-escalated, Thus an email is escalated (arrow 111) to the immediate assistance tier 103 if it has not been answered when a "time-to-reply" period elapses." (See Detailed Description, P. 0026, lines 18-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sikora's et al. invention by having a pre-defined threshold for a contact (i.e. wherein the queuing engine is operable to determine the amount that

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a work item has been waiting to be assigned to an agent) and escalating such contact when a certain period of time elapses (i.e. to escalate the search for an agent to handle the work item based on the escalation rules), as taught by Broughton et al.; and thus in this manner provide a more efficient service to the contact customer.

7. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sikora et al. (US 6,449,646) in view of Crowther et al. (EP 1113656).

Sikora et al. discloses the system as claimed except for the limitations specifying "wherein the queuing agent is operable to determine the language required to handle each work item, and to assign each work item to one or more of the agents based on the language required" and "wherein the queuing engine is operable to determine the level of agent skill required to handle each work item, and to assign each work item to one or more of the one or more agents based on the level of skill required."

Crowther et al. teaches "An agent may be assigned to one or more skillsets and priority levels within such one or more skillsets. [...] For example, an agent may be trained to answer technical questions about a product line, trained to provide sales support, speak other languages, etc. In one embodiment, to be allocated to a specific skillset an agent must possess all skills required to handle calls in that skillset. It is also contemplated that the agent need not possess all skills in that particular skillset in order to be assigned or allocated to that particular skillset. Agents can be assigned to more than one skillsets. The agent is also assigned a priority level in each skillset so that a supervisor or manager of the call center can ensure that agents are most effectively

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used, depending on their knowledge and level of training.” (See Detailed Description, Col. 2, lines 57-58 and Col. 3, lines 1-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sikora's et al. claimed invention by assigning skillsets to an agent based on other languages spoken by said agent (i.e. wherein the queuing agent is operable to determine the language required to handle each work item, and to assign each work item to one or more of the agents based on the language required), based on agent's training for answering technical questions about a product line (i.e. wherein the queuing engine is operable to determine the level of agent skill required to handle each work item, and to assign each work item to one or more of the one or more agents based on the level of skill required); as per the teachings of Crowther et al.; thus in this manner a supervisor or manager of the call center can ensure that agents are most effectively used, depending on their knowledge and level of training.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

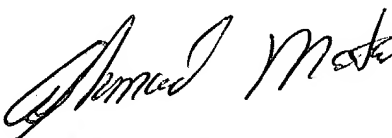
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie C. Ubiles whose telephone number is (703) 305-0684. The examiner can normally be reached on 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marie C. Ubiles  
October 29, 2004.

  
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